

## Other: Alphajet 12/02/16

### Aircraft:

Other: Alphajet

### Flight Number:

204

### Payload Configuration:

O3, HCHO

### Nav Data Collected:

Yes

### Total Flight Time:

1.3 hours

### Submitted by:

Kent Shiffer on 03/24/17

### Flight Segments:

<b>From:</b>	KNUQ	<b>To:</b>	Chew?s Ridge observatory
<b>Start:</b>	12/02/16 19:57 Z	<b>Finish:</b>	12/02/16 21:12 Z
<b>Flight Time:</b>	1.3 hours		
<b>Log Number:</b>	<a href="#">17M030</a>	<b>PI:</b>	Laura Iraci
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	<p>Aims: A) To collect O3, HCHO, and wind profile over Chew?s Ridge observatory, followed by boundary layer legs to sample around and upwind of Chew?s Ridge Observatory Coordinates: 36° 18' 22"N, 121° 33' 55"W, elev: 5045 ft B) To evaluate MMS performance by conducting several maneuvers: (est. 45 min) Select an altitude between 6.5 kft to 16 kft depending on atmospheric conditions. 1) At tbd kft fly straight leg at 200 KIAS, then reverse heading along same track. 2) At tbd kft execute the following set of calibration maneuvers: a. Pitch Cycle: (+5 deg to -5 deg) x 5 with constant roll angle and constant altitude. Repeat for 175 KIAS, 200 KIAS, 225 KIAS, 250 KIAS b. Yaw Cycle: (+5 deg to -5 deg) x 5 with constant roll angle and constant altitude. Repeat for 175 KIAS, 200 KIAS, 225 KIAS, 250 KIAS c. Box maneuver: Four 90 deg turns separated by at least 10 sec of straight flight. Roll angle +/- 45 deg. Avoid roll ?overshoot? Hold altitude and true airspeed constant Repeat for 175 KIAS, 200 KIAS, 225 KIAS, 250 KIAS 3) Aileron roll left x 2, Aileron roll right x 2</p>		

### Flight Hour Summary:

	15M037	16M019	17M030
<b>Flight Hours Approved in SOFRS</b>	70		
<b>Flight Hours Previously Approved</b>		25.1	
<b>Total Used</b>	44.9	51.6	12.5
<b>Total Remaining</b>			-27

### 17M030 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">11/02/16</a>	202	Science	1.9	1.9	-16.4
<a href="#">11/03/16</a>	203	Science	1.2	3.1	-17.6
<a href="#">12/02/16</a>	204	Science	1.3	4.4	-18.9
<a href="#">01/31/17</a>	206	Science	1.9	6.3	-20.8
<a href="#">02/23/17</a>	207	Science	1	7.3	-21.8
<a href="#">03/01/17</a>	208	Science	1.9	9.2	-23.7
<a href="#">03/09/17</a>	209	Science	2	11.2	-25.7
<a href="#">03/23/17</a>	210	Science	1.3	12.5	-27

### 16M019 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">10/01/15</a>	171	Science	1.7	1.7	23.4

<a href="#">10/07/15</a>	172	Science	2	3.7	21.4
<a href="#">10/22/15</a>	173	Science	1	4.7	20.4
<a href="#">11/17/15</a>	174	Science	2	6.7	18.4
<a href="#">12/04/15</a>	175	Science	1.8	8.5	16.6
<a href="#">12/09/15</a>	176	Science	1.8	10.3	14.8
<a href="#">12/11/15</a>	177	Science	1	11.3	13.8
<a href="#">12/15/15</a>	178	Science	1	12.3	12.8
<a href="#">01/08/16</a>	179	Science	1.8	14.1	11
<a href="#">01/12/16</a>	180	Science	2.2	16.3	8.8
<a href="#">03/10/16</a>	181	Science	1.4	17.7	7.4
<a href="#">03/17/16</a>	182	Science	2	19.7	5.4
<a href="#">03/23/16</a>	183	Science	1.5	21.2	3.9
<a href="#">03/30/16</a>	184	Science	1.8	23	2.1
<a href="#">04/19/16</a>	185	Science	1.7	24.7	0.4
<a href="#">04/26/16</a>	186	Science	1.9	26.6	-1.5
<a href="#">05/04/16</a>	187	Science	1.9	28.5	-3.4
<a href="#">05/12/16</a>	188	Science	1.5	30	-4.9
<a href="#">05/19/16</a>	189	Science	2	32	-6.9
<a href="#">06/03/16</a>	190	Science	1.9	33.9	-8.8
<a href="#">06/15/16</a>	191	Science	1.9	35.8	-10.7
<a href="#">06/21/16</a>	192	Science	1.7	37.5	-12.4
<a href="#">07/01/16</a>	193	Science	2.1	39.6	-14.5
<a href="#">07/06/16</a>	194	Science	1.7	41.3	-16.2
<a href="#">07/11/16</a>	195	Science	1.3	42.6	-17.5
<a href="#">07/28/16</a>	196	Science	2	44.6	-19.5
<a href="#">08/09/16</a>	197	Science	1.7	46.3	-21.2
<a href="#">08/12/16</a>	198	Science	1.7	48	-22.9
<a href="#">08/24/16 - 08/25/16</a>	199	Science	0.7	48.7	-23.6
<a href="#">09/14/16</a>	200	Science	1.6	50.3	-25.2
<a href="#">09/21/16</a>	201	Science	1.3	51.6	-26.5

**Source URL:** [https://airbornescience.nasa.gov/flight\\_reports/Other\\_Alphajet\\_12\\_02\\_16](https://airbornescience.nasa.gov/flight_reports/Other_Alphajet_12_02_16)

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Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

#### 15M037 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">10/02/14</a>	144	Science	2	2	68
<a href="#">10/08/14</a>	145	Science	1.7	3.7	66.3
<a href="#">10/15/14</a>	146	Science	1.3	5	65
<a href="#">10/24/14</a>	147	Science	1	6	64
<a href="#">11/06/14</a>	148	Science	1	7	63
<a href="#">11/10/14</a>	149	Science	1.6	8.6	61.4
<a href="#">11/25/14</a>	150	Science	2	10.6	59.4
<a href="#">12/10/14</a>	151	Science	1.3	11.9	58.1
<a href="#">03/18/15</a>	152	Science	2.1	14	56
<a href="#">03/25/15</a>	153	Science	1.5	15.5	54.5
<a href="#">03/31/15</a>	154	Science	1.9	17.4	52.6
<a href="#">04/14/15</a>	155	Science	1.8	19.2	50.8
<a href="#">04/24/15</a>	156	Science	2.1	21.3	48.7
<a href="#">05/12/15</a>	157	Science	1.6	22.9	47.1
<a href="#">05/19/15</a>	158	Science	1.5	24.4	45.6
<a href="#">05/27/15</a>	159	Science	1.5	25.9	44.1
<a href="#">06/02/15</a>	160	Science	2	27.9	42.1
<a href="#">06/11/15</a>	161	Science	1.5	29.4	40.6
<a href="#">06/29/15</a>	162	Science	2	31.4	38.6
<a href="#">07/01/15</a>	163	Science	2.1	33.5	36.5
<a href="#">07/22/15</a>	164	Science	1.2	34.7	35.3
<a href="#">07/29/15</a>	165	Science	1.5	36.2	33.8
<a href="#">08/05/15</a>	166	Science	1.4	37.6	32.4
<a href="#">08/19/15</a>	167	Science	2.1	39.7	30.3
<a href="#">09/02/15</a>	168	Science	1.6	41.3	28.7
<a href="#">09/17/15</a>	169	Science	2.3	43.6	26.4
<a href="#">09/24/15</a>	170	Science	1.3	44.9	25.1